

L 8494-66

ACC NR: AP5026477

associated with phase transformations in catalysts were observed at calcining temperatures from 400 to 950C. The free hydroxyl groups OD are bound to the silicon surface atoms by bonds which remain stable even at 450C. In conclusion, author thanks V. A. Dzis'ko <sup>4455</sup> for interest in the work, N. V. Akimova <sup>4455</sup> for providing the samples, and A. M. Plyasova <sup>4455</sup> and A. A. Ostan'kovich <sup>4455</sup> for assistance in the preparation of the x-ray powder patterns and thermograms. Orig. art. has: 4 figures and 1 table.

SUB CODE: 07 / SUBM DATE: 27 May 64 / ORIG REF: 006 / OTH REF: 004

BVI  
Card 2/2

DZIS'KO, V.A.; BORISOVA, M.S.; KARAKCHIYEV, L.G.; MAKAROV, A.D.; KOTSARENKO, N.S.; ZUSMAN, R.I.; KHRIFIN, L.A.

Effect of chemical composition and the method of preparation  
on the physicochemical and catalytic properties of oxide  
catalysts of complex composition. Part 3: Silica-magnesia  
catalysts. Kin. i kat. 6 no. 6:1033-1040 N-D '65  
(MIRA 19:1)

1. Institut kataliza Sibirskogo otdeleniya AN SSSR. Submitted  
August 13, 1964.

BUYANOV, R.A.; ANDRUSHKEVICH, M.M.; KARAKCHIYEV, L.G.

Nature and causes of aging of a chromium-iron-zinc catalyst.  
Kin. i kat. 6 no. 6:1069-1072 N-D '65 (MIRA 19:1)

1. Institut kataliza Sibirskogo otdeleniya AN SSSR. Submitted  
July 7, 1965.

KARAKCHIYEV, L.G.; MAKAROV, A.D.

Structure of some silicate catalysts. Kinetika i kat. 3 no. 5:747-750  
S-0 '62. (MIRA 16:1)

1. Institut kataliza Sibirskogo otdeleniya AN SSSR.  
(Catalysts) (Silicates)

ACCESSION NR: AP4044387

S/0195/64/005/004/0630/0636

AUTHOR: Karakchlyev, L. G.; Barachevskiy, V. A.; Kholmogorov, V. Ye.

TITLE: Spectroscopic investigation of the acidity of some silicate catalysts

SOURCE: Kinetika i kataliz, v. 5, no. 4, 1964, 630-636

TOPIC TAGS: silicate, catalyst, aluminum oxide, magnesium oxide, silicon dioxide, titanium dioxide, anthracene, spectroscopy, catalyst acidity, aluminum silicate, magnesium silicate, titanium silicate, electron paramagnetic resonance, zircon

ABSTRACT: The acidity of catalysts of the type  $\text{Al}_2\text{O}_3+\text{SiO}_2$ ,  $\text{MgO}+\text{SiO}_2$  and  $\text{TiO}_2+\text{SiO}_2$  was investigated by absorption spectra and the electron paramagnetic resonance of adsorbed molecular ions of anthracene. The most intensive absorption bands and EPR signals, and hence the highest number of acid centers, were found in the systems  $\text{Al}_2\text{O}_3+\text{SiO}_2$  and  $\text{ZrO}_2+\text{SiO}_2$ . The absorption curves for anthracene adsorbed on the initial oxides and on  $\text{Al}_2\text{O}_3+\text{SiO}_2$  catalysts are plotted for comparison. The absorption band of the cation radical was at  $700 \mu\text{}$  for anthracene molecules adsorbed on the surface of  $\gamma\text{-Al}_2\text{O}_3$ . It was found that  $\text{MgO}+\text{SiO}_2$ ,  $\text{ZrO}_2+\text{SiO}_2$  and  $\text{Al}_2\text{O}_3+\text{SiO}_2$  have both proton and aprotic acidities. In the adsorbents investigated,  $\text{Al}^{+3}$  with a coordination number of 4 was present in three compositions: 5%  $\text{Al}_2\text{O}_3+95\%$   $\text{SiO}_2$ , 10%  $\text{Al}_2\text{O}_3+90\%$   $\text{SiO}_2$  and 25%  $\text{Al}_2\text{O}_3+75\%$   $\text{SiO}_2$ . The maximum acidity was observed

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ACCESSION NR: AP4044387

for compositions with a maximum content of tetracoordinated  $\text{Al}^{+3}$  and  $\text{Mg}^{+2}$ , respectively.  $\text{ZrO}_2\text{+SiO}_2$  has a maximum acidity at a composition close to the equimolecular. On the basis of the symbatic variation of the proton and aprotic acidities with catalyst composition, it can be assumed that the occurrence of acid centers is due to the same cause and is associated with the coordination of  $\text{Al}^{+3}$ ,  $\text{Mg}^{+2}$  and  $\text{Zr}^{+4}$  in the catalysts. The investigation of the anthracene absorption curves for  $\text{TiO}_2\text{+SiO}_2$  catalysts showed that if, after the adsorption of the anthracene molecules on the silicagel surface, oxygen is introduced (at 20 mm Hg) and heated in a closed system up to 100°C, the temperature of adsorption of anthracene, a spectrum of brown heterogeneous oxidation products of anthracene is obtained. This shows the presence of surface atomic oxygen in  $\text{TiO}_2$ , which oxidizes the adsorbed molecules. The variation in intensity in the different spectra is due to the different concentration of acid centers on the surface of the catalysts and the nature of the interaction of the adsorbed cation radicals. "The authors thank M. S. Borisova and N. V. Akimova for supplying the catalyst samples, as well as A. N. Terenin and V. A. Dzis'ko for their exceptional attention to this investigation." Orig. art. has: 7 figures and 1 table.

ASSOCIATION: Nauchno-Issledovatel'skiy fizicheskiy Institut Leningradskogo gosudarstvennogo universiteta im. A. A. Zhdanova (Scientific Research Institute of Physics, Leningrad State University); Institut kataliza SO AN SSSR (Institute of Catalysis, USSR Academy of Sciences)

Card 2/3

ACCESSION NR: AP4044387

of Catalysts, SO AN SSSR)

SUBMITTED: 22Jan64

SUB CODE: IC, OP

NO REF Sov: 009

ENCL: 00

OTHER: 003

Card3/3

KARAKCHIYEV, L.G.

Nature of aluminosilicate catalysts. Kin. i kat. 5 no.4:742-745  
(MIRA 17:11)  
Jl-Ag '64.

I. Institut kataliza Sibirskogo otdeleniya AN SSSR.

KARAKCHIYEV, N.I. (Karaganda)

Effect of novocaine block of the stellate ganglia on diphosgene-induced pulmonary edema. Pat. fiziol. i eksp. terap. 7 no.6:71-72 N-D '63.  
(MIRA 17:7)

1. Iz kafedry patolog cheskoy fiziologii (zav. - prof. A.Ya. Lazaris) Karagandinskogo meditsinskogo instituta.

KARAKCHIYEV, N.I.; YAKOBSON, V.N. (Karaganda)

Effect of chloral hydrate on diphogene pulmonary edema. Pat.  
fiziol.i eksp.terap. 6 no.2:50-54 Mr-Ap '62. (MIRA 15:8)

1. Is kafedry patologicheskoy fiziologii (zav. - prof. Ya.A.Lazaris)  
Karagandinskogo meditsinskogo instituta.

(PULMONARY EDEMA) (CHLORAL) (GASES, ASPHYXIATING AND POISONOUS)

KARAKEKHAYOV, G.

Voyennoinzhennerno Delo /Military Engineering Manual/ G. Karakekhayov  
i N. Rukhchev. Sofiya, "Meditina i Fizkultura", 1957.

250 P. Illus., Diagrs., Tables.

Cover title varies: Rukovodstvo Po Voyenno- Inzhe--Nerno Delo.  
USIB No. 3687833

KARAKESVIC, Bogdan, d-r

Epidemiological problems of staphylococcal infections. God.  
Zborn. Med. Fak. Skopje no.10:84-99 '63.

1. Mikrobičloski institut medicinskog fakulteta, Skopje  
(direktor d-r Bogdan Karakesevic).

KARAKESUZIYAN, R., Major.

Instilling in combat engineers a love for their specialties. Voen.-  
izob. zhur. 101 no.5:6-9 My '57.

(MLRA 10:6)

(Military education)

KARAKESHISHYAN, R., mayor

Military traditions of a unit decorated four times. Voen.-inzh. zhur.  
102 no.5:5-10 My '58. (MIRA 11:6)  
(Military engineers) (World War, 1939-1945)

KARAKEYEV, K.K.

Principal results of the scientific activities of the Academy of Sciences of the Kirghiz S.S.R. in 1960. Vest.AN Kir.SSR no.2:5-16 '61.  
(MIRA 15:3)

1. President Akademii nauk Kirgizskoy SSR.  
(Kirghizistan—Research)

KELDYSH, M.V.; PALLADIN, A.V.; KUPREVICH, V.F.; ABDULLAYEV, Kh.M.; SATPAYEV,  
K.I.; MUSKHELISHVILI, N.I.; MAMEDALIYEV, Yu.G.; MATULIS, Yu.Yu.;  
GROSUL, Ya.S.; PLAUME, K.K.; KARAKHEYEV, K.K.; UMAROV, S.U.;  
AMBARTSUMYAN, V.A.; BATYROV, Sh.B.; EYKHFEL'D, I.G. [Eichfeld, J.]

Comments by presidents. Nauka i zhizn' 28 no.10:2-17 0 '61.  
(MIRA 15:1)

1. Prezident Akademii nauk SSSR (for Keldysh).
2. Prezident Akademii nauk Ukrainskoy SSR (for Palladin).
3. Prezident Akademii nauk Belorusskoy SSR (for Kuprevich).
4. Prezident Akademii nauk Uzbekskoy SSR (for Abdullayev).
5. Prezident Akademii nauk Kazakhskoy SSR (for Satpayev).
6. Prezident Akademii nauk Gruzinskoy SSR (for Muskhelishvili).
7. Prezident Akademii nauk Azerbaydzhanskoy SSR (for Mamedaliyev).
8. Prezident Akademii nauk Litovskoy SSR (for Grosul).
9. Prezident Akademii nauk Moldavskoy SSR (for Matulis).
10. Prezident Akademii nauk Latviyskoy SSR (for Plaude).
11. Prezident Akademii nauk Kirgizskoy SSR (for Karakeyev).
12. Prezident Akademii nauk Tadzhikskoy SSR (for Umarov).
13. Prezident Akademii nauk Armyanskoy SSR (for Ambartsumyan).
14. Prezident Akademii nauk Turkmeneskoy SSR (for Batyrov).
15. Prezident Akademii nauk Estonskoy SSR (for Eykhfel'd).

(Russia--Economic conditions) (Research)

KARAEYEV, K.K., akademik

Science in Soviet Kirgizia. Vest. AN SSSR 33 no.8:52-54 Ag  
'63. (MIRA 16:8)

1. AN Kirgizskoy SSR, president AN Kirgizskoy SSR.  
(Academy of Sciences of the Kirghiz S.S.R.)

FEDORENKO, N.P., akademik; SUKACHEV, V.N., akademik; KARAKEYEV, K.K.; FRANK, G.M.; KONSTANTINOV, B.P., akademik; ASTAUROV, B.L.; YEFIMOV, A.N.; SHUMILOVSKIY, N.N.; ISHLINSKIY, A.Yu., akademik; GERASIMOV, I.P., akademik; KAZARNOVSKIY, I.A.; BYKHOVSKIY, B.Ye., akademik; ZHEBRAK, A.R., akademik

Discussion of the annual report. Vest.AN SSSR 35 no.3:95-112  
Mr '65. (MIRA 18:4)

1. Prezident AN Kirgizskoy SSR (for Karakeyev).
2. Chleny-korrespondenty AN SSSR (for Frank, Astaurov, Yefimov, Kazarnovskiy).
3. AN Kirgizskoy SSR (for Shumilovskiy).
4. AN BSSR (for Zhebrak).

KARAKEZOV, R.G.

Clinical aspects of acousticomyselitis. Azerb. med. zhur. no.  
6:40-43 Je '62. (MIRA 17:8)

LALENKOV, Vladislav Nikolayevich; KARAKH, A.S., retsenzent;  
BARTS. Ye.G., retsenzent; STEPANOV, N.G., otv. red.;  
FISHCHENKO, B.V., red.

[Installation of the electrical equipment of industrial  
enterprises and systems] Montazh elektrooborudovaniia  
promyshlennyykh predpriatii i ustanovok. Khar'kov, Izd-  
vo Khar'kovskogo univ., 1965. 333 p. (MIRA 18:7)

L 53736.65 EPF(c)/EPR/EPA(s)-2/EWT(m)/EMP(i)/EMP(b)/EMP(e) Fq-4/Pr-4/Ps-4/Pt-7

WW/WH

ACCESSION NR: AP5015562

UR/0286/65/000/008/0119/0119  
666.189.211 G

AUTHOR: Shkol'nikov, Ya. A.; Polik, B. M.; Karakhanidi, N. G.; Ivanov, P. K.; Bober, E. I.; Ulybyshev, V. V.; Alen'kin, A. T.; Bugrova, N. N.; Simakov, D. P.; Shchipin, I. Ye.; Gur'veva, Yu. N.; Yefimova, M. I.; Nechayeva, Ye. S.; Yesilkina, K. N.; Ivanova, A. I.; Dayn, E. P.; Nabatov, V. G.; Novoyevskaya, Ye. A.; Mukin, Yu. I.; Balashov, V. N.; Gamza, L. B.

TITLE: Glass for glass fibers. Class 32, No. 170369 15

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 8, 1965, 119

TOPIC TAGS: glass, glass fiber

ABSTRACT: An Author Certificate has been issued for a glass suitable for making glass fibers. To increase chemical durability, to prevent corrosion of alloys of aluminum and other light metals, and to improve processability, the glass is formulated to contain: 58-63% SiO<sub>2</sub>, 2-4% B<sub>2</sub>O<sub>3</sub>, 6-8% Al<sub>2</sub>O<sub>3</sub>, 0.5-1.5% P<sub>2</sub>O<sub>5</sub>, 4-6% ZrO<sub>2</sub>, 6-8% CaO, 12-13% Na<sub>2</sub>O, and 1.5-2% K<sub>2</sub>O. (SM)

ASSOCIATION: none

Cord 1/2

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L 53736-65  
ACCESSION NR: AP5015562

SUBMITTED: 07Dec62

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NO REF SOV: 000

OTHER: 000

ATD PRESS: 4019

Card 2/2

APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000720530002-2"

KARAKHANIN, Ya. I.

USSR/Physics - Luminescence

Card 1/1 : Pub. 22 - 16/44

Authors : Karakhanin, Ya. I., and Lashkarev, V. E., active member of the  
Active member of the Acad. of Scs. of the Ukr. SSR

Title : About the nature of cuprous sulfate luminescence

Periodical : Dok. AN SSSR 97/6, 1007-1010, Aug 21, 1954

Abstract : Experimental study of cuprous sulfate ( $Cu_2O$ ) luminescence is described. Dependence of the luminescence on temperature and conductivity of the  $Cu_2O$ , was investigated. The role played by photo-electrons and excitons as the source of the luminescence was investigated by placing samples into an electric field. Twelve references (1941-1954). Graphs.

Institution : Kiev State University im. T. G. Shevchenko

Submitted : ...

ZARETSKIY, S.A.; BUSSE-MACHUKAS, V.B.; KARAKHANOV, A.A.

Anodic critical current densities in electrolytes: NaCl, KCl,  
NaCl - CaCl<sub>2</sub> and NaCl - BaCl<sub>2</sub> - CaCl<sub>2</sub>. Zhur.prikl.khim. 34  
no.11:2478-2482 N '61. (MIRA 15:1)  
(Electrolytes) (Electric charge and distribution)

SHUYKIN, N.I.; VIKTOROVA, Ye.A.; POKROVSKAYA, I.Ye.; KARAKHANOV, E.A.

Alkylation of phenols by compounds having two functions. Report  
No.6: Catalytic alkylation of  $\rho$ -cresol by 1,4-butanediol and tetra-  
hydrofuran. Izv. AN SSSR Otd.khim.nauk no.1:122-124 Ja '62.  
(MIRA 15:1)

1. Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova.  
(Cresol) (Butanediol) (Furan)

VIKTOROVA, Ye.A.; SHUYKIN, N.I.; KARAKHANOV, E.A.

Alkylation of p-cresol by 3-phenyl-1-propen-3-ol. Izv. AN SSSR  
Ser. khim. no.12:2216-2217 D '64 (MIRA 18:1)

1. Institut organicheskoy khimii imeni N.D. Zelinskogo AN SSSR.

VIKTOROVA, Ye.A.; SHUYKIN, N.I.; KARAKHANOV, E.A.

Contact-catalytic transformations of phenols. Report No.8:  
Alkylation of m-cresol by butadiene. Izv.AN SSSR.Otd.khim.nauk  
no.6:1080-1082 '62. (MIRA 15:8)

1. Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova.  
(Cresol) (Alkylation) (Butadiene)

SHUYKIN, N.I.; VIKTOROVA, Ye.A.; LI SHI [Li Shih]; KARAKHANOV, E.A.

Conversions of n.butylphenols on dehydrocyclization catalysts.  
Izv.AN SSSR.Otd.khim.nauk no.11:2054-2058 N '61. (MIRA 14:11)

1. Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova.  
(Phenol) (Catalysis)

VIKTOROVA, Ye.A.; SHUYKIN, N.I.; KARAKHANOV, E.A.;

Alkylation of phenols by bifunctional compounds. Report No.9: Alkylation of m- and p-cresols by conjugated diene hydrocarbons in the presence of ethylsulfuric acid. Izv. AN SSSR. Ser.khim. no.7:1281-1284 Jl '63. (MIRA 16:9)

1. Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova.  
(Cresol) (Alkylation) (Hydrocarbons)

VIKTOROVA, Ye.A.; SHUYKIN, N.I.; KARAKHANOV, E.A.

Catalytic alkylation of p-cresols with dipropenyl. Izv. AN  
SSSR. Ser. khim. no.12:2226-2227 D '63. (MIRA 17:1)

1. Moskovskiy gosudarstvennyy universitet im. M.V. Lomonosova.

1. KARAKHANOV, L. M. Eng.
2. USSR (600)
4. Tung Tree
7. Principle characteristics of the tung tree and agrotechnical specifications for tung nut cleaning machinery. Sel'khozmashina no. 10, 1952.

9. Monthly List of Russian Accessions, Library of Congress, February 1953, Unclassified

"APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000720530002-2

LORDKIPANIDZE, T.G., inzhener; KARAKHANOV, L.M., inzhener.

Choice of equipment for difficult tea plant trimming. Sel'khozmashina no.9:  
3-6 S '53. (MLRA 6:9)  
(Tea machinery)

APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000720530002-2"

KARAKHANOV, L.M., inzhener.

Critical description of existing machinery for cleaning tung tree seeds.  
Sel'khozmashina no.6:9-12 Je '54. (MIRA 7:6)  
(Agricultural machinery) (Tung tree)

KARAKHANOV, L. M.,

"Problems of Devising a Tung Oil Refining Machine." (Dissertation for Degree of Candidate for Technical Sciences) Min Higher Education USSR, Georgian Order of Labor Red Banner Agricultural Inst. Tbilisi, 1955

SO: M-1036 28 Mar 56

MCHEDLISHVILI, T.Z., inzhener; KARAKHANOV, L.M., inzhener.

Mechanization of hedge type pruning of tea plants. Sel'khozmashina  
no.11:17-20 N '55. (MLRA 9:1)

1.GSKB po chayu.  
(Agricultural machinery) (Pruning)

KARAKHANOV, L.M., inzhener.

Studying some physical and mechanical properties of fruits and  
other parts of tung necessary in designing tung cleaning  
machines. Sel'khozmashina no.3:13-16 Mr '56. (MIRA 9:7)

1.Gosudarstvennoye spetsial'noye konstrukterskoye byuro po  
chayu.  
(Tung tree) (Agricultural machinery)

KARAKHANOV, L.M., kand.tekhn.nauk

Kinematics of working parts of the tungseed cleaning machine.  
Trakt. i sel'khozmash. no.10:22-24 0 '58. (MIRA 11:10)

1. GIME  
(Machinery, Kinematics of) (Agricultural machinery)

KARAKHANOV, L.M., kand.tekhn.nauk

Technological evaluation of the machine harvesting of tea leaves.  
Trakt. i sel'khozmash. 30 no.8:28-29 Ag '60. (MIRA 13:8)  
(Tea--Harvesting)

BLOK, Ye.M.; UBRAGIMOV, M.; KANDALOV, S.A.; KARAKHANOV, M.; PONOMAREV,  
A.S.; PARAMOSHKIN, I.M.; YUSUPOV, F.; USIMENKO, I.L.,  
red.-sostavitel'; SULTANOV, G., red.; NADZHIMOV, G., red.:  
UMANSKIY, P.A., tekhn.red.

[Achievements of Uzbekistan in forty years of Soviet rule;  
statistical collection] Uzbekistan za 40 let Sovetskoi  
vlasti; statisticheskii sbornik. Tashkent, Gos.izd-vo  
Uzbekskoi SSR, 1958. 134 p. (MIRA 12:11)  
(Uzbekistan--Statistics)

5(3)

AUTHORS: Shuykin, N.I., Viktorova, Ye.A., SOV/55-58-5-21/34

Karakhanov, R.A.

TITLE: Synthesis of Tetrahydrofurylcyclopentylmethane (Sintez tetra-  
gidrofuriltsiklopentilmetana)

PERIODICAL: Vestnik Moskovskogo universiteta, Seriya matematiki, mekhaniki,  
astronomii, fiziki, khimii, 1958, Nr 5, pp 133 - 134 (USSR)

ABSTRACT: According to a method of the author deviating from the method  
of M.M. Katsnel'son and M.S. Kondakova [Ref 1] at first furyl-  
cyclopentylcarbinol was obtained. After dehydration over  
aluminum oxide under 350° - 375° furfuralcyclopentane was ob-  
tained. After hydration under 125° - 130° in presence of a  
nickel catalyst and subsequent rectification the authors  
attained tetrahydrofurylcyclopentylmethane.  
There is 1 Soviet reference.

ASSOCIATION: Kafedra khimii nefti (Chair of Petroleum Chemistry)

SUBMITTED: October 2, 1957

Card 1/1

AUTHORS: Shuykin, N. I., Corresponding Member, SOV/20-122-4-24/57  
Academy of Sciences, USSR; Bel'skiy, I. F.,  
Karakhanov, R. A.

TITLE: On the Reaction Mechanism of the Furane Cycle Catalytic  
Hydrogenolysis (O mekhanizme reaktsii kataliticheskogo  
gidrogenoliza furanovogo tsikla)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol 122, Nr 4, pp 625 -  
628 (USSR)

ABSTRACT: The problem whether the reaction mentioned in the title  
passes the hydration stage of double bonds of the cycle,  
i.e. with a subsequent cleavage of the formed tetra-  
hydrofuran cycle at one of the C-O-bonds, was raised  
several times. This problem was rejected by several scien-  
tists (Refs 1 - 3). It was proved that the tetra-hydro-  
furane-cycle does not hydrogenolyze at all under the condi-  
tions of the hydration in the liquid phase, whereas the  
furane cycle hydrogenolyses to a great extent. The authors  
proved recently (Ref 6) that the homologs of tetra-hydro-  
furane can be isomerized on Rt-coal at 250 - 300° in  
aliphatic ketones. However, this reaction passes much more

Card 1/3

On the Reaction Mechanism of the Furane Cycle  
Catalytic Hydrogenolysis

SOV/20-122-4-24/57

slowly than an immediate hydrogenolysis of the alkyl furanes themselves under the same conditions. Therefore, the tetrahydrofuranes cannot be considered to be intermediate products in the hydrogenolysis reaction of the furane compounds. All mentioned investigations led thus to the conclusion that the hydrogenolysis of the C-O-bond may take place either in the cycle of furane itself or in the dihydrofuran cycle. The formation of the latter as an intermediate product is confirmed by the transformation of silvane into  $\gamma$ -acetone-propylalcohol in the presence of water (Ref 7). In the present paper the authors investigated the hydration of the dihydrosilvane in the gaseous phase on platinized charcoal and on nickel to zinc oxide at 250 - 260°. Thus it was proved that not the hydrogenolysis of the C-O-bond, but the hydration of the C-C-bond in the cycle is the main reaction. The formation of methyl-propylketone in the hydration of the dihydrosilvane on Pt-C may take place in consequence of a secondary isomerization reaction of tetra-hydrosilvane. Tetra-hydrosilvane is not isomerized to methyl-propylketone on Ni-ZnO. The above results are interpreted differently

Card 2/3

On the Reaction Mechanism of the Furane Cycle  
Catalytic Hydrogenolysis

SOV/20-122-4-24/57

by the authors. There are 13 references, 3 of which are  
Soviet.

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii  
nauk SSSR (Institute of Organic Chemistry imeni  
N. D. Zelinskogo, AS USSR)

SUBMITTED: June 20, 1958

Card 3/3

5(3)  
AUTHORS: Shuykin, N. I., Corresponding Member, Sov/20-125-5-27/61  
AS USSR, Bel'skiy, I. F., Karakhanov, R. A.

TITLE: Thermal Isomerization of 2-Methyl-4,5-dihydrofuran to  
Methyl-cyclopropyl Ketone (Termicheskaya izomerizatsiya  
2-metyl-4,5 digidrofurana v metiltsiklopropilketon)

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 125, Nr 5,  
pp 1051-1052 (USSR)

ABSTRACT: According to reference 1 2,3-dihydrofuran isomerizes at 375°  
to cyclopropane aldehyde. A small quantity of croton aldehyde  
is formed therein, which is partially decarbonylated to  
propylene under the experimental conditions. The gas  
development increases with rising temperature. The first  
reaction is reversible. The inequivalence of the C-O bonds  
depends in the dihydrofuran molecule only on the presence  
of the double bond. This very fact is bound to determine  
the place of rupture of the dihydrofuran ring. Wilson (Ref 1)  
assumed that 2,3-dihydrofuran behaves in the aforesaid  
isomerization like simple vinyl ethers. According to  
formal-structural considerations it is, however, clear that

Card 1/3

Thermal Isomerization of 2-Methyl-4,5-dihydrofuran to SOV/20-125-5-27/61  
Methyl-cyclopropyl Ketone

the formation of cyclopropane aldehyde in the rupture of the dihydrofuran ring is possible at the C-O bond 1.2 as well as at the C-O bond 1.5. Therefore the results of the isomerization of the 2,3-dihydrofuran cannot indicate definitely the place of rupture of the dihydrofuran ring. In the case of the isomerization of  $\alpha$ -alkyl-dihydrofurans two different products - aldehyde or ketone - are bound to be produced according to the C-O bond which has been ruptured. The authors tried to investigate the isomerization of such  $\alpha$ -alkyl-substituted 2,3-dihydrofurans mentioned in the title, the alkyl group of which is found at the double bond. They found that 2-methyl-4,5-dihydrofuran isomerizes to methyl-cyclopropyl ketone at 475 - 500° (Reaction II, see Scheme). Thus, the C-O bond 1.5 is ruptured and a new bond is formed between the C-atoms 3 and 5 and the keto-group in the side chain. The reaction carried out here is irreversible, in contrast with the isomerization of 2,3-dihydrofuran to cyclopropane aldehyde which is reversible.

There are 2 references.

Card 2/3

Thermal Isomerization of 2-Methyl-4,5-dihydrofuran to SOV/20-125-5-27/61  
Methyl-cyclopropyl Ketone

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii  
nauk SSSR (Institute of Organic Chemistry imeni N. D.  
Zelinskogo of the Academy of Sciences, USSR)

SUBMITTED: February 5, 1959

Card 3/3

S/079/60/030/006/033/033/XX  
B001/B055

AUTHORS: Shuykin, N. I., Bel'skiy, I. F., and Karakhanov, R. A.

TITLE: Hydrogenolysis of Tetrahydrofurans

PERIODICAL: Zhurnal obshchey khimii, 1960, Vol. 30, No. 6,  
pp. 1933 - 1937

TEXT: Since all the investigations of Refs. 1 - 4 on the reaction mechanism of the catalytic hydrogenation of the furan ring were mainly carried out to establish only this mechanism, it sufficed to determine that the furan- and the tetrahydrofuran ring behaved differently in hydrogenolysis, without investigating possible transformations of tetrahydrofurans during hydrogenolysis in greater detail. In an investigation of the hydrogenolysis of tetrahydrofurans, however, everything indicating the difference between the furan and the tetrahydrofuran rings and their behavior in hydrogenolysis is of importance. For this reason the authors of the present work investigated the hydrogenolysis of tetrahydrofurans. They studied the hydrogenolysis of

Card 1/3

Hydrogenolysis of Tetrahydrofurans

S/079/60/030/006/033/033/XX  
B001/B055

2-alkyl-, 2,2-dialkyl-, and 2,5-dialkyl-tetrahydrofurans in the vapor phase at atmospheric pressure, using platinized carbon and a nickel-aluminum skeleton catalyst. The hydrogenolysis of tetrahydrofuran homologs requires higher temperatures and takes an entirely different course than the hydrogenolysis of furan compounds. Hydrogenolysis of tetrahydrofurans on platinized carbon at 350°C, besides causing isomerization to aliphatic carbonyl compounds, occurs simultaneously at both C-O bonds. This leads to paraffin hydrocarbons with the same number of carbon atoms as the initial tetrahydrofurans. On the nickel-aluminum skeleton catalyst, hydrogenolysis of 2-alkyl- and 2,2-dialkyl-tetrahydrofurans occurs at the C-O bond adjacent to the alkyl groups. Primary alcohols and aldehydes forming as intermediates react to give paraffin hydrocarbons, the carbon chains of which contain one carbon atom less than the initial tetrahydrofuran derivative. The nickel-aluminum skeleton catalyst also causes a more radical decomposition of tetrahydrofurans, thus forming water and gaseous products. The hydrogenolysis of furans has definite advantages over that of tetrahydrofurans, since in the first case aliphatic alcohols and ketones

Card 2/3

Oxidation of  $\beta$ -Ketoacetals by  
Means of Lead Tetraacetate

S/079/60/030/006/032/033/xx  
B001/B055

A reaction mechanism is suggested involving intermediate formation of  $\alpha$ -alkoxy vinyl ketone and subsequent acetoxylation with lead tetraacetate. A method was developed for the synthesis of  $\alpha$ -hydroxy- $\beta$ -ketoacetals by treating  $\alpha$ -acetoxy- $\beta$ -ketoacylal compounds with a methanolic solution of hydrogen chloride (Scheme 5) (yield 35 - 65%). It was shown that  $\alpha$ -acetoxy- $\beta$ -ketoacylals react with polyhydric phenols or  $\beta$ -naphthol forming 3-acetoxy substituted benzo- or naphtho-pyrylium salts. The data given show that  $\alpha$ -acetoxy- $\beta$ -ketoacylals are now accessible and may prove important for the synthesis of several hitherto inaccessible heterocyclic compounds. There are 14 references: 7 Soviet, 4 US, 3 German.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet  
(Moscow State University)

SUBMITTED: June 11, 1959

Card 3/3

S/020/60/132/03/26/066  
B011/B008

5.3200

AUTHORS: Bel'skiy, I. F., Shuykin, N. I., Corresponding Member  
AS USSR, Karakhanov, R. A.

TITLE: Thermal Dehydrogenation of 2,5-Dihydrofuran<sup>1</sup>

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 132, No. 3,  
pp. 585-586

TEXT: The authors produced 2-methyl-, 2-ethyl- and 2-isopropyl-2,5-dihydrofuran under such conditions and investigated their transformations, under which 2-methyl-4,5-dihydrofuran is isomerized to methyl-cyclopropyl-ketone. The vapors of the compounds mentioned in the introduction were passed over crushed quartz or activated carbon at 470-480°. It turned out that 2-alkyl-2,5-dihydrofurans are very easily dehydrogenated to corresponding furan-homologues (see Scheme). The reaction proceeds equally easily over quartz and activated carbon. The authors conclude therefrom that this dehydrogenation is not a catalytic reaction, but is only caused by temperature which must be fairly high; 350°, for instance, are insufficient for this purpose. At 470-480° the tetra-

Card 1/2

Thermal Dehydrogenation of 2,5-Dihydrofurans

S/020/60/132/03/26/066  
B011/B008

hydrofuran ring is changed neither over quartz nor carbon in any way. The authors state therefore that a second (conjugated) double bond is formed more easily than the first (isolated) one. This phenomenon is also observed in other cases. Finally, the authors also point out that for the formation of a furan ring, the double bond must be shifted from the position 3,4 to the position 2,3 or 4,5. Such systems, however, would isomerize to cyclopropane-carbonyl compounds. Since this does not occur, the authors suppose that the shifting of the 3,4-double bond and the cleavage of 2 hydrogen atoms takes place simultaneously and without formation of the 2,3-dihydrofuran as an intermediate. The authors thus come to the following result: contrary to the 2,3-dihydrofurans which are isomerized to aldehydes or ketones of the cyclopropane-series, 2,5-dihydrofurans are dehydrogenated and form corresponding furan compounds. There are 5 references, 4 of which are Soviet.

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo  
Akademii nauk SSSR (Institute of Organic Chemistry imeni  
N. D. Zelinskogo of the Academy of Sciences, USSR)

SUBMITTED: February 22, 1960

Card 2/2

BEL'SKIY, I.F.; SHUYKIN, N.I.; KARAKHANOV, R.A.

Isomerization and dehydrogenation reactions of the tetrahydrofuran cycle. Dokl.AN SSSR 138 no.4:829-830 Je '61. (MIRA 14:5)

1. Institut organicheskoy khimii imeni N.D.Zelinskogo AN SSSR.
2. Chlen-korrespondent AN SSSR (for Shuykin).  
(Furan)

SHUYKIN, N.I.; BEL'SKIY, I.F.; KARAKHANOV, R.A.

Catalytic dehydrogenation of dihydrofurans. Dokl.AN SSSR 138  
no.5:1136-1138 Je '61. (MIRA 14:6)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.
2. Chlen-korrespondent AN SSSR (for Shuykin).  
(Furan) (Dehydrogenation)

BEL'SKIY, I.F.; KARAKHANOV, R.A.

New method of synthesizing  $\gamma$ -diketones. Report No.1: Catalytic transformation of furan and tetrahydrofuran alcohols into  $\gamma$ -diketones. Izv. AN SSSR. Otd.khim.nauk no.5:905-907 My '62. (MIRA 15:6)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.  
(Furan) (Ketones)

SHUYKIN, N.I.; HEL'SKIY, I.F.; KARAKHANOV, R.A.

Catalytic dehydrogenation of dihydrofurans. Synthesis of  
2,4-dialkyl furans. Dokl. AN SSSR 147 no.1:119-122 N '62.

(MIRA 15:11)

1. Institut organicheskoy khimii im. N.D. Zelinskogo  
AN SSSR. 2. Chlen-korrespondent AN SSSR (for Shuykin).

(Furan)  
(Dehydrogenation)

SHUYKIN, N.I.; BEL'SKIY, I.F.; KARAKHANOV, R.A.

Catalytic dehydrogenation of dihydrofurans. Izv. AN SSSR Otd.khim.-  
nauk no.1:138-142 Ja '62.  
(MIRA 15.1)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.  
(Furan) (Dehydrogenation)

SHUYKIN, N.I.; BEL'SKIY, I.F.; KARAKHANOV, R.A.

'Thermal transformations of dihydrofurans. Izv.AN SSSR.Otd.khim.  
nauk no.2:377-378 F '63. (MIRA 16:4)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.  
(Furan)

S/062/63/000/003/009/018  
B101/B186

AUTHORS: Shuykin, N. I., Petrov, A. D., Glukhovtsev, V. G, and Karakhanov, R. A.

TITLE: Transformations of the 1-methyl-2- $\alpha$ -furyl cyclopropane and 1-cyclopropyl-2- $\alpha$ -furyl cyclopropane on catalytic hydrogenation

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye khimicheskikh nauk, no. 3, 1963, 521 - 524

TEXT: Hydrogenation of the 1-methyl-2- $\alpha$ -furyl cyclopropane gave rise to 2-n-butyl and that of the 1-cyclopropyl-2- $\alpha$ -furyl cyclopropane with a palladium-carbon catalyst (15 % Pd) at 300°C produced 2-n-hexyltetrahydrofuran, with a yield of about 95 %. The hydrogenation of the furan rings proceeds in these bicyclic or tricyclic systems just as easily as with the simplest alkyl derivatives of the furan. The cyclopropane ring is broken open by the addition of hydrogen. The ring cleavage takes place between the tertiary C atoms. Synthesis of the 1-methyl-2- $\alpha$ -furyl-cyclopropane,

b.p. 143.5°C/759 mm Hg,  $n_D^{20}$  = 1.4735,  $d_4^{20}$  = 0.9499, by distillation of Card 1/2

S/062/63/000/003/009/018

B101/B186

Transformations of the ...

the 3-methyl-5- $\alpha$ -furyl pyrazolin in the presence of dry KOH is suggested.  
The yield is 90 %.

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii  
nauk SSSR (Institute of Organic Chemistry imeni N. D.  
Zelinskogo of the Academy of Sciences USSR)

SUBMITTED: June 4, 1962

Card 2/2

SHUYKIN, N.I.; BEL'SKIY, I.F.; GRUSHKO, I.Ye.; KARAKHANOV, R.A.

Synthesis of 1,3,4-trihaloalkanes. Izv. AN SSSR. Otd.khim.nauk  
no.6:1088 Je '63. (MIRA 16:7)

1. Institut organicheskoy khimii imeni Zelinskogo AN SSSR.  
(Paraffins) (Halogen compounds)

SOBOLEV, Ye.V.; ALEKSANYAN, V.T.; KARAKHANOV, R.A.; BEL'SKIY, I.F.;  
OVODOVA, V.A.

Raman spectra of some alkyl-substituted furans. Zhur.strukt.khim,  
4 no.3:358-363 My-Je '63. (MIRA 14:6)

1. Komissiya po spektroskopii AN SSSR.  
(Furan--Spectra)

SHUYKIN, N.I.; BEL'SKIY, I.F.; SHOSTAKOVSKIY, V.M.; KARAKHANOV, R.A.

Synthesis of tetrahydrofuran ketones and their isomerization to  
 $\gamma$ -diketones. Dokl. AN SSSR 151 no.6:1350-1351 Ag '63.  
(MIRA 16:10)  
1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.

FLID, R.M., doktor khim.nauk; KARAKHANOV, R.A.

All-Union chemists' conferences in Alma-Ata and Erivan. Vest.  
AN SSSR 33 no.2:119-121 F '63. (MIRA 16:2)  
(Chemistry--Congresses)

POVAROV, L.S.; GRIGOS, V.I.; KARAKHANOV, R.A.; MIKHAYLOV, B.M.

Reactions of dihydropyran and 2-methyldihydrofuran with some  
Schiff bases. Izv.AN SSSR. Ser.khim. no.1:179-181 Ja '64.

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.  
(MIRA 17:4)

BEL'SKIY, I.F.; SHUYKIN, N.I.; KARAKHANOV, R.A.

Synthesis of  $\gamma$ -ketols and dihydrofurans based on 1-furyl-3-al-kanols. Izv.AN SSSR.Ser.khim. No.2:326-331 F '64. (MIRA 17:3)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.

SI UYKIN, N. I.; AP'OK, Y.; BARTOK, M.; BEL'SKIY, I. F.; KARAKHANOV,  
R. A.

Synthesis and isomerization of 2-n-propyl-5-phenyltetrafurane.  
Izv AN SSSR Ser Khim no. 4:746-747 Ap '64. (MIRA 17:5)

1. Institut organicheskoy khimii im. N. D. Zelinskogo AN SSSR.

SFYUKIN, N. I.; BEL'SKIY, I. F.; KARAKHANOV, R. A.; KOZMA, B.; BARTOK,  
M.

Isomerization of tetrahydropyrans. Izv AN SSSR Ser Khim  
no. 4:747-750 Ap '64. (MIRA 17:5)

1. Institut organicheskoy khimii im. N. D. Zelinskogo  
AN SSSR.

SHUYKIN, N. I.; BELESKIY, I. F.; KARAKHANOV, R. A.; NAZARYAN, A. A.

Synthesis of -diketones by conjugated hydrogenolysis. Izv  
AN SSSR Ser Khim no. 4:750-751. Ap '61. (MIRA 175)

1. Institut organicheskoy khimii im. N. D. Zelinskogo AN  
SSSR.

SHUYKIN, N.I.; BARTOK, M.; KARAKHANOV, R.A.; SHCHOSTAKOVSKIY, V.M.

Investigation of the chemical transformations of diols and  
organic oxides. Pt. 7. Acta phys chem Szeged 9 no. 3/4:124-130  
'63.

1. Institut organicheskoy khimii im.N.D.Zelinskogo Akademii  
nauk SSSR, Moscow (for Shuykin,Karakhanov and Shchostakovskiy).
2. Kafedra organicheskoy khimii universiteta im.Yozhef Attila,  
Szeged (for Bartok).

GLUKHOVTSEV, V.G.; SHUYKIN, N.I.; ZAKHAROVA, S.V.; KARAKHANOV, R.A.;  
IBRAKHIMOV, I.

Synthesis of aldehydo alcohols and ketols of the furan series.  
Dokl. AN SSSR 156 no. 4:869-872 Je '64. (MIRA 17:6)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.
2. Chlen-korrespondent AN SSSR (for Shuykin).

MIKHAYLOV, B.M.; POVAROV, L.S.; GRIGOS, V.I.; KARAKHANOV, R.A.

Reactions of dihydrosylvan with Schiff bases. Izv. AN SSSR, Ser. khim.  
no. 9: 1693-1695 S '64. (MIRA 17:10)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.

SHUYKIN, N.I.; KARAKHANOV, R.R.; ISRAKIMOV, I.

Conversions of tetrahydrofuran homologs on pyrolyzed coal.  
Izv. AN SSSR Ser. khim. nesl:165-167 '65.

(MGA 18:2)  
1. Institut organicheskoy khimii im. N.D. Zelinskogo AN SSSR.

POVAROV, L.S.; GRIGOS, V.I.; KARAKHANOV, R.A.; MIKHAYLOV, B.M.

Reactions of halogen-containing Schiff's bases with unsaturated ethers. Izv. AN SSSR Ser. khim. no.2:365-367 '65.

(MIRA 18:2)

l. Institut organicheskoy khimii im. N.D. Zelinskogo AN SSSR.

GLUKHOVTSEV, V.G.; ZAKHAROVA, S.V.; KARAKHANOV, R.A.

Synthesis of difunctional derivatives of the furan and tetra-hydrofuran series. Izv. AN SSSR Ser. khim. no.2;389-391 '65.

1. Institut organicheskoy khimii im. N.D. Zelinskogo AN SSSR.  
(MIRA 18:2)

SHUTKIN, N.I.; KARAEVANOV, R.A.; ISRAKHMOW, I.I.; KONISKAR'VA, B.I.

Synthesis and transformations of 2-methyl-2-allyl-2,5-dihydrofuran.  
Izv. AN SSSR. Ser. khim. no. 1:122-125 '66.

(MIRA 19:11)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR. Submitted August 26, 1963.

SHUYKIN, N.I.; KARAKHANOV, R.A.; GLUKHOVTSEV, V.G.; IBRAKHIMOV, I.I.

Transformations of furyl- and tetrahydro-3-furylalkanols on  
active carbon. Izv. AN SSSR. Ser. khim. no. 1:182-184 '66.

(MIRA 19:1)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.  
Submitted June 2, 1965.

ACCESSION NR: AP4009986

S/0109/64/009/001/0138/0143

AUTHOR: Karakhanov, V. Ya.; Tatishvili, D. G.

TITLE: Low-frequency oscillations in plasma conversion cells

SOURCE: Radiotekhnika i elektronika, v. 9, no. 1, 1964, 138-143

TOPIC TAGS: thermionic conversion cell, plasma conversion cell, thermionic converter, plasma converter, plasma converter oscillations

ABSTRACT: An experimental investigation of low-frequency oscillations in a thermionic conversion cell is reported, with cesium-vapor pressures of from  $8 \times 10^{-7}$  to 0.6 torr and tungsten-cathode temperatures 800-2,400C. A 0.1-mm-diameter W filament was spanned through 7 cylindrical kovar anodes. The two outer were guarding anodes, the five inner had 4, 6, 8, 12, and 16 mm ID, which permitted a study of the effect of the anode diameter on the frequency of oscillations. It was found that the frequency is strongly dependent on the cathode

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ACCESSION NR: AP4009986

temperature and the Cs-vapor pressure: in one case, the frequency varied from 160 kc to 4 kc when the pressure was raised from 0.018 torr to 0.5 torr. At low pressures, the frequency decreased as the temperature increased; at high pressures, the frequency increased with the temperature. The reported results are qualified as "preliminary." "In conclusion, the authors wish to thank I. G. Gverdtsiteli and R. Ya. Kucherov for their constant interest in the work." Orig. art. has: 6 figures and 2 formulas.

ASSOCIATION: none

SUBMITTED: 24Oct62

DATE ACQ: 10Feb64

ENCL: 00

SUB CODE: SD, PH

NO REF SOV: 002

OTHER: 007

Cord 2/2

ACCESSION NR: AP4013422

S/0057/64/034/002/0326/0332

AUTHOR: Karakhanov, V.Ya.; Kucherov, R.Ya.; Tatishvili, D.G.

TITLE: Investigation of the voltage-current characteristics of the oscillations of a low pressure plasma thermoelement

SOURCE: Zhurnal tekhn.fiz., v.34, no.2, 1964, 326-332

TOPIC TAGS: plasma, diode, plasma diode, cesium plasma diode, low pressure plasma diode, plasma diode current, plasma diode oscillation, thermoelement

ABSTRACT: The current in a cesium plasma diode was investigated as a function of anode potential and cesium pressure for anode potentials from -12 to +600 V and pressures from  $10^{-6}$  to  $10^{-2}$  mm Hg. Both the direct and the alternating components of the current were measured. The 12 mm diameter 2 mm thick tantalum cathode was located 1 mm from a massive water-cooled kovar anode. The cathode was operated at a temperature of 2080°C. This temperature was monitored with an optical pyrometer and maintained by electron bombardment. The cesium vapor in the diode was in contact with metallic cesium in a side arm, and the pressure was adjusted by controlling the temperature. At anode potentials below -5 V the anode current was small and in-

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ACCESSION NR: AP4013422

dependent of the potential. This current is ascribed to surface ionization. When the anode potential was increased somewhat above -5 V the current rose sharply to a large value. At an anode potential between -2.3 and -2.6 V (depending on the pressure), oscillations set in and the current fell, the sum of the direct anode current and the amplitude of the oscillations remaining constant. The amplitude of the oscillations and the direct anode current reached steady values at an anode potential of about -1 V. These steady values were maintained until an anode potential of the order of 10 V was reached. At higher anode potentials the oscillation amplitude diminished and the direct anode current rose until saturation was reached or breakdown occurred. At sufficiently high pressures, the sum of the direct anode current and the oscillation amplitude in the plateau region was equal to the saturation current of the diode. At lower pressures this sum was somewhat less than the saturation current, in accordance with a previously published theory (R.Ya.Kucherov, L.E.Rikenglaz, ZhTF, 32, 1275; 1962). The amplitude of the oscillations in the plateau region, where it was independent of the anode potential, reached a maximum of about 100 ma/cm<sup>2</sup> at a pressure near 10<sup>-5</sup> mm Hg. The amplitude was less at higher pressures, and oscillation did not occur at pressures above 10<sup>-2</sup> mm Hg. For small range of pressure around 10<sup>-5</sup> mm Hg the device was unstable; it could be maintained in a non-oscillat-

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Card

ACCESSION NR: AP4013422

ing condition for some time, after which oscillation would spontaneously set in. The frequency of the oscillations was nearly independent of the anode potential throughout the plateau region. As a function of pressure, the frequency dropped from about 540 kc/sec at  $10^{-5}$  mm Hg to a minimum of about 330 kc/sec at  $5 \times 10^{-5}$  mm Hg. At pressures above  $10^{-4}$  mm Hg, the frequency behaved in accordance with the findings of F.Johnson (RCA REV.22,22,1961). The appearance of oscillations at negative anode potentials seems to contradict the conclusion of R.Zollweg and M.Gottlieb (J.Appl.Phys.52,890,1961) that oscillations can occur only when the field at the cathode is positive. By considering the work functions of the electrodes, however, and making a plausible assumption concerning the effect on them of adsorbed cesium ions, one can conclude that the present data are compatible with the hypothesis that oscillations occur only when the potential immediately outside the anode is greater than that immediately outside the cathode. "The authors thank I.G.Gverdtsitel' and V.K.Tskhakaya for attention and interest in the work, and A.P.Prikhodov and L.S.Kukina for assistance in setting up and conducting the experiments." Orig. art.has: 6 figures.

ASSOCIATION: Fiziko-tehnicheskiy institut im.A.F.Ioffe AN SSSR, Leningrad (Physical-Technical Institute, AN SSSR)

SUBMITTED: 28Jan68

DATE ACQ: 26Feb64

ENCL: 00

SUB CODE: PH  
Card 3/3

NR REF Sov: 002

OTHER: 004

KARAKHANOV, Ya.

Determining relative altitudes of meteors from visual observations.  
Izv.AN Turk.SSR. no.2:96 '55. (MLRA 9:5)

1. Institut fiziki i geofiziki AN Turkmeneskoy SSR.  
(Meteors)

KAPRIYELOV, G.M.; KARAKHANOV, Ya.

Effect of different concentrations of molybdenum in the  
environment on content of molybdenum in the blood of frogs.  
Izv. AN Turk. SSR. Ser. biol. nauk no.1:80-81 '62. (MIRA 15:3)

1. Turkmen'skiy gosudarstvennyy meditsinskiy institut.  
(MOLYBDENUM—PHYSIOLOGICAL EFFECT)  
(FROGS)

HERDIYEV, A.A.; GOLOVKOVA, L.I.; KARAKHANOV, Ya.

Determining zirconium and yttrium by spectrum analysis.  
Trudy fiz.-tekhn. inst. AN Turk. SSR 8:5-18 '62.

(Spectrum analysis)  
(Zirconium) (Yttrium) (MIRA 15:11)

L 38459-66 EWT(m)/EWP(t)/ETI IJP(c) RDW/JD

ACC NR: AP6023911

SOURCE CODE: UR/0363/66/002/007/1186/1189

AUTHOR: Karakhanova, M. I.; Pashinkin, A. S.; Novoselova, A. V.

ORG: Moscow State University im. M. V. Lomonosov (Moskovskiy gosudarstvennyy universitet)

TITLE: Phase diagram of tin-selenium system

SOURCE: AN SSSR. Izv. Neorg materialy, v. 2, no. 7, 1966, 1186-1189

TOPIC TAGS: tin selenium system, tin-selenium alloy, alloy phase ~~composition~~, alloy property ~~composition~~

ABSTRACT: Phase equilibrium in tin-selenium alloys with a selenium content varying from 40 to 100 at% has been studied with the use of thermal and x-ray diffraction analysis. Alloys were prepared by melting 0-1 tin (GOST 860-60),<sup>4</sup> and rectifier-grade selenium (GOST 6738-53)<sup>5</sup> in a quartz ampoule under a pressure of  $10^{-3}$ - $10^{-4}$  mm Hg. The phase diagram of the Sn-Se system (see Fig. 1), plotted on the basis of the obtained data, is characterized by the presence of two compounds: tin monoselenide (melting point, 880C) and tin diselenide (melting point, 675C). An Sn-Se eutectic

Card 1/2

UDC: 546.811+546.23

OTH REF: 007/ ATD PRESS:  
5447

VOLKOV, V.P.; POLYAKOV, A.I.; KARAKHANOVA, M.I.; VORONINA, L.P.

Petrochemical characteristics and associations of nepheline syenite  
accessory minerals of the differentiated complex of the Lovozero al-  
kaline massif. Geokhimia no.8:656-665 '61. (MIRA 17:3)

1. Institut geokhimii i analiticheskoy khimii imeni V.I.Vernadskogo  
AN SSSR, Moskva.

KARAKHANOVA, R.A.

Change in the nervous system of the skin in experimental animals  
under the effect of naphthalan petroleum with and without bathing.  
Azerb. med. zhur. no.7:30-35 Jl '61. (MIRA 15:1)  
(SKIN INNERVATION) (NAPHTHALAN)

*REF ID: A6513*

L 52170-65	EWT(1)/EWA(j)/EWA(b)-2	Pa-4	RO
ACCESSION NR:	AP5015539	UR/0286/65/000/000/0080/0080	
AUTHORS:	Mamedov, Sh.; Mamedova, A. Kh. A.-K.; Avanasyan, M. A.; Osipov, O. V.; Zaynulova, V. N.; Kerzhaneva, S. V.		
TITLE:	A method for controlling weeds. Class 45, No. 170246		
SOURCE:	Byulleten' izobretений i tovarnykh znakov, no. 8, 1965, 80		
TOPIC TAGS:	agriculture, pesticide, ester		
ABSTRACT:	This Author Certificate presents a method for controlling weeds by herbicides. To broaden the assortment of herbicides, para- $\beta$ -cresoxy- $\beta$ -carboxydiethyl ester is used for this purpose.		
ASSOCIATION:	none		
SUBMITTED:	31Jul64	ENCL:	00
NO REF SOV:	000	SUB CODE:	00
OTHER:	000		
Q4 Card 1/1			

ALIZADE, M.A.; MAMEDOV, Shamkhal; KARAKHANOVA, S.V.

Effect of efiran 99 on carbohydrate and protein metabolism in  
weeds. Izv. AN Azerb. SSR. Ser. biol. nauk no.6:19-22 '64.

(MIRA 18:6)

MURADYAN, G.T.; KARAKHANYAN, E.G.

Study of skin temperature in epileptic patients. Zhur. eksp.  
i klin. med. 3 no.5:89-94 '63. (MIRA 17:2)

KARAKHANYAN, O.I.

PERSHIN, G.N., laureat Stalinskoy premii, professor, redaktor;  
SHCHUKINA, M.N., professor, redaktor; MATRADZE, A.G., otvetstvennyy  
sekretary'; SERGIYEVSKAYA, S.I., professor, chlen redaktsionnoy  
kollegii; MAGIDSON, O.Yu., professor, laureat Stalinskoy premii,  
chlen redaktsionnoy kollegii; UTKIN, L.M., professor, chlen redaktsion-  
noy kollegii; MASHKOVSKIY, M.D., professor, chlen redaktsionnoy kolle-  
gii; KARAKHANYAN, O.I., redaktor; GLURHOYEDOVA, G.A., tekhnicheskiy  
redaktor.

[Synthomycin] Sintomitsin. Otvet. red. G.N.Pershin. Moskva, Gos.  
izd-vo med. lit-ry. 1954. 194 p.  
(MLRA 7:8)

1. Moscow. Nauchno-issledovatel'skiy khimiko-farmatsevticheskiy  
institut.  
(Chloromycetin)

MANVELYAN, M.G.; GRIGORYAN, G.O.; KARAKHANYAN, S.S.

Complex processing of table salt. Part 2: Decomposition of ammonium chloride by sulfuric acid with the production of ammonium bisulfate and hydrogen chloride. Izv. AN Arm.SSR. Khim.nauki 18 no.1:92-95 '65. (MIRA 18:5)

1. Yerevanskiy nauchno-issledovatel'skiy institut khimii.

MANVELYAN, M.G.; GRIGORYAN, G.O.; GAZARYAN, S.A.; PAPYAN, G.S.;  
KARAKHANYAN, S.S.; MELIK-ISRAYELYAN, L.S.

Simultaneous recovery of sulfur and nitrogen oxides of low concentration by means of alkalies and carbonates. Report No.6: Effect of inhibitors on the oxidation of calcium sulfite to sulfate by atmospheric oxygen in the presence of nitrogen oxide traces. Izv.AN Arm.SSR.Khim.nauki 14 no.1:27-33 '61.

(MIRA 15:5)

1. Institut khimii Soveta narodnogo khozyaystva Armyanskoy SSR.  
(Calcium sulfite) (Oxidation) (Inhibition (Chemistry))

ACC NR: AF/002616 (A,N) SOURCE CODE: UR/0413/66/000/023/0130/0130

INVENTOR: Ivanov, V. V.; Shcheglov, G. M.; Spasskiy, K. N.; Karakhan'yan, V. K.; Prudovskiy, B. M.; Semenov, M. I.; Sergeyev, V. A.; Smirnov, I. N.; Britvin, L. N.; Shtel'makh, A. A.

ORG: None

TITLE: An impeller. Class 59, No. 189315 [announced by the All-Union Scientific Research Institute of Hydraulic Machine Building (Vsesoyuznyy nauchno-issledovatel'skiy institut gidromashinostroyeniya)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 23, 1966, 130

TOPIC TAGS: centrifugal pump, blade profile, metal blade, pump component

ABSTRACT: This Author's Certificate introduces: 1. An impeller for an open centrifugal pump. Pump efficiency is improved and the rigidity of the impeller blades is increased by making the blades in the cylindrical section with a channel shape. The walls of the blade channel are recurved toward the front at a sharp angle to the walls of the pump housing. 2. A modification of this impeller in which the blade channel formed in the cylindrical section has a flat bottom. 3. A modification of this impeller with U-shaped grooves in the flat bottom of the channel on the working side of the blade. These grooves are adjacent to the end surfaces of the blades.

Card 1/2

UDC: 621.671.1-253.5

ACC NR: AP7002616

4. A modification of this impeller equipped with a flat annular rim connected to each blade at the middle of its end sections. 5. A modification of this impeller equipped with flat ribs which connect the middle of the end section on the back side of each blade to the central section of the working side of the following blade.

SUB CODE: 13/ SUBM DATE: 13Jul65

Card 2/2

KARAKHASH'YAN, G.,

Agriculture & Plant & Animal Industry.

Agrarian reforms in the German Democratic Republic. Moskva, Gos. izd-vo polit. lit-ry, 1951.

Monthly List of Russian Acquisitions, Library of Congress, April 1952. UNCLASSIFIED.

KARAKHMEDOVA, V.

Years of growth, Obshchestv. pit no. 6:49-50 Je '60.  
(MIRA 13:?)

1. Zamestitel' ministra torgovli AzerSSR.  
(Azerbaijan--Restaurants, lunchrooms, etc.)

"APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000720530002-2

KARAKHNIN, A.

Luminous signaling. Muk.-elev.prom. 22 no.5:24 My '56. (MILRA 9:9)  
(Signals and signaling)

APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000720530002-2"

KARAKHODZHAYEV, S. KH.

USSR/Medicine - Leishmaniasis Jul/Aug 53

"Treatment of Visceral Leishmaniasis in Children With Solsurmin (I)," Docent-B. Kh. Karakhodzhayev, Children's Clinic, Samarkand Med Inst im I.P. Pavlov

Pediat., No 4, pp 60-61

I proved to be more effective than neostibosan in the treatment of visceral leishmaniasis. Both intravenous and subcutaneous methods of injecting a 10% soln of I were used in treating 28 children between the ages of 9 mos and 12 yrs. The first injection consisted of 0.05g of I per kg of

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patient's weight; the second injection, of 0.075g. Each subsequent injection was equal to 0.1g or 1 per kg of patient's weight. Recovery was noted on an average after 10-12 injections. I produced no toxic effects even after doses as large as 0.15g per kg of patient's weight were used.

KARAKHODZHAYEV Ə. Kh.

COUNTRY	:	USSR	V
CATEGORY	:	Pharmacology and Toxicology. Chemotherapeutical preparations. Antibiotics	
ABS. JOUR.	:	RZhBiol., No. 1 1959, No. 4654	
AUTHOR	:	Karakhodzhayev, B.; Solopova, Yu.S.	
INST.	:	-	
TITLE	:	Treatment of Dysenteric Children with Levomycetin	
ORIG. PUB.	:	Med. zh. Uzbekistana, 1957, No.4, 29-31	
ABSTRACT	:	No abstract	
CARD:	1/1		